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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/017,454	12/13/2001	Densen Cao	5061 P	6760
7590	12/23/2004			
Parsons, Behle & Latimer 201 South Main Street, Suite 1800 P.O. Box 45898 Salt Lake City, UT 84145-0898				
			EXAMINER LEWIS, RALPH A	
			ART UNIT 3732	PAPER NUMBER

DATE MAILED: 12/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/017,454	Applicant(s) CAO, DENSEN	
	Examiner Ralph A. Lewis	Art Unit 3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 25-33 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12/13/2001 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Finality of 03/26/2004 Office Action Withdrawn

The Finality of the 03/26/2004 Office Action is withdrawn in view of the new grounds of rejection.

Objection to the Claims

Claims 27-31 are objected to under 37 CFR 1.75(a) for failing to particularly point out and distinctly claim the subject matter which applicant regards as his/her invention

In claims 27, 28 and 29, there is no antecedent basis for "said well."

In claim 31, line 2, it appears as though "sink" has been inadvertently deleted.

Rejections based on Prior Art

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 26, 31, 32 and 33 are rejected under 35 U.S.C. 102(a) as being anticipated by Mills (WO 99/16136).

Mills discloses a dental curing light (page 1, second paragraph) comprised of a hand held wand (Figure 5) having an elongate secondary heat sink 45, a primary heat sink 48 mounted at the distal end of the elongated heat sink and LED semiconductors 43 mounted to the primary heat sink 48. Light guide 41 directs light emitted from the LED's 43 at an angle from the elongated heat sink 45 that appears to be about 45° - 135°. The light traveling from the "curing light" travels at an angle set by the light guide.

Additionally it is noted that, the light emitted directly by the Mills LED's is primarily in a forward direction to the light guide 41 - it is how the Mills et al device is designed to operate. However, as is taught by Doiron et al (US 5,698,866) (see Figures 11 and 12) and applicant (note Figures 20a, 21a) LED's emit a small amount of incident light outwardly at an angle.

Claims 32 and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Kovac et al (US 200,134).

Lovac et al disclose a wand/handle having a longitudinal axis, a heat sink 46 and a semiconductor chip 43 (Figure 2) wherein the light is emitted from the curing light at angle (note 36, Figure 1) that falls within the broad range of angles claimed.

more light from the LEDs is reflected forward in the desired direction. To have mounted the Mills LEDs in wells as taught by Doiron et al so that more light is reflected forward in the desired direction would have been obvious to one of ordinary skill in the art. In regard to claims 27-30, the use of conventional adhesives and materials would have been obvious to the ordinarily skilled artisan.

Action Made Final

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Contact Information

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 26 and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136).

Mills fails to explicitly disclose the angle of light guide 41, however, one of ordinary skill in the art would have found it obvious to have provided for an angle within the broad range claimed.

Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kovac et al (US 200,134).

Kovac et al fail to explicitly disclose the angle of light guide 22, however, one of ordinary skill in the art would have found it obvious to have provided for an angle within the broad range claimed.

Claims 25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (WO 99/16136) in view of Doiron et al (5,698,866).

In Mills the LEDs are mounted directly on a flat heat sink 48. Doiron et al, however, teach that an improvement over mounting diodes on a flat surface (Figures 9 and 10) is mounting them in a well (Figures 11 and 12) formed on the heat sink so that


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Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication should be directed to **Ralph Lewis** at telephone number **(571) 272-4712**. Fax (703) 872-9306. The examiner works a compressed work schedule and is unavailable every other Friday. The examiner's supervisor, Kevin Shaver, can be reached at (571) 272-4720.

R.Lewis
December 17, 2004



Ralph A. Lewis
Primary Examiner
AU3732